Element Code: PDCOR01040

## Added to Rank 2.2 of the CNPS Inventory on December 11, 2012

# Rare Plant Status Review: *Cornus canadensis*Proposed New Add to Rank 2.3 2.2, G5 / S2

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Changes made to the original document appear in blue text.

### **Background**

Cornus canadensis is a perennial rhizomatous herb/subshrub in the Cornaceae family. It has a circumboreal distribution, with several occurrences extending into northern California. It is included in *The Jepson Manual* (1993) and *The Jepson Manual*, *Second Edition* (*TJM 2*; available online at http://ucjeps.berkeley.edu/cgibin/get\_IJM.pl?tid=20389), but the *Flora of North America* treatment for Cornaceae is not yet available. It is very distinct from other members of the genus in its somewhat herbaceous habit; most other *Cornus* spp. are shrubs or trees. It is easily recognized, even by amateur botanists, as it is a showy plant of ornamental value (Hitchcock et al. 1961, D. Taylor pers. comm. 2012, first author pers. obs. 2003). *TJM 2* reports that *C. canadensis* flowers from May to July. Specimens have been collected in California until as late as October (Consortium of California Herbaria, CCH, 2012), but the plant is easily identified in its fruiting stage (first author pers. obs. 2003). Thus, the late season collections may be fruiting, not flowering.

Cornus canadensis occurs in moist areas within North Coast coniferous forests. Sometimes it is found in meadows and bogs (CCH 2012, Smith and Wheeler 1992). It grows from 60 to 1920 meters in elevation in California.

Cornus canadensis has been collected from Siskiyou County in far northern California to as far south as Mendocino County. There are only about nine eleven known occurrences in California, none only two of which have been documented recently (occurrences not documented in the past 20 years are considered historical by the CNDDB). No collections have been made in California since 1975 (CCH 2012). The Pacific Union College Herbarium (PUA) should be reviewed in order to discover potential additional records of *C. canadensis* in California (G. Clifton pers. comm. 2012). Several populations near the southern limit of the species (within California at least) have already been extirpated (T. Sholars pers. comm. 2012, Smith and Wheeler 1992). Four occurrences are found in the Klamath National Forest, probably within the Russian Wilderness (M. Knight pers. comm. 2012). Cornus canadensis has not been discovered in northern Sonoma County even after extensive surveys (C. Golec pers. comm. 2012. A. Howald pers. comm. 2012), and has also not shown up in many surveys throughout Del Norte, Humboldt, and Mendocino counties in the past (G. Leppig pers. comm. 2012, J. Nelson pers. comm. 2012, C. Sanville pers. comm. 2012, J. Wheeler pers. comm. 2012).

Element Code: PDCOR01040

Outside of California, *Cornus canadensis* is very common throughout much of its range. In Canada, the type locality, it can form dense carpets on the forest floor (Smith and Wheeler 1992). It is not ranked in many states where it occurs, but it is Critically Imperiled (S1; generally 5 or fewer occurrences) in six states that are along its southern boundary (Illinois, Indiana, Iowa, Maryland, New Mexico, and Virginia; NatureServe 2012). Further north, it is either ranked Secure (S5) or unranked in all Canadian provinces and territories.

Threats to *Cornus canadensis* in California are not currently known; the cause of the extirpations in Mendocino County is still unknown. Natural succession may be a reasonable threat to C. canadensis now that fellers and fire are pretty much gone (B. Maslach pers. comm. 2012). The occurrences from more northern locations in California are somewhat remote, and probably not highly threatened (M. Knight pers. comm. 2012). One would expect diminished genotypic diversity at the geographic limit of a species' distribution, but the wide elevation gradient among the California occurrences of *C. canadensis* suggests otherwise (D. Taylor pers. comm. 2012). Global climate change may threaten the persistence of *C. canadensis* in California, as it is at the southern limit of its range in the state, and due to its mesic affinities (R. Raiche pers. comm. 2012).

Although *C. canadensis* occurs in some remote parts of the state, its paucity of collections probably cannot be explained simply by a lack of collecting. The showiness of this plant suggests that, if it were more common in California, it would have been collected more frequently (D. Taylor pers. comm. 2012). Based on the available information, CNPS and CNDDB recommend adding *Cornus canadensis* to Rank 2.3 2.2 of the CNPS Inventory. If current records in California are later found to be an underrepresentation of its actual distribution and frequency, CNPS and CNDDB will revaluate it at that time.

#### **Recommended Actions**

CNPS: Add to CNPS 2.3 2.2 CNDDB: Add to CNDDB G5 / S2

#### **Draft CNPS Inventory Record**

Cornus candensis L. bunchberry
Cornaceae
Rank 2.3 2.2

Humboldt, Mendocino, Siskiyou

Alaska, Colorado, Connecticut, Idaho, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming

Element Code: PDCOR01040

Fort Bragg (569A) 3912347, Mendocino (569D) 3912337, Grouse Mtn. (670C) 4012376, Maple Creek (671D) 4012377, Eaton Peak (701C) 4112238, Somes Bar (703B) 4112344, Broken Rib Mtn. (738B) 4112386

North Coast coniferous forest, bogs and fens, meadows and seeps; elevation 60 to 1920 meters.

Perennial rhizomatous herb. Blooms May to July.

Several populations at the southern end of its distribution in CA are extirpated. Many collections old; need field surveys. Possibly threatened by meadow succession and climate change. See *Species Plantarum* 1:118 (1753) for original description.